

## ABSTRACT OF THE DISCLOSURE

There are included: an initial sub-signal creation section which creates, from an original signal, sub-signals of shorter length than the original signal; a created sub-signal selection section which, for the sub-signals produced by the initial sub-signal creation section, prunes the created sub-signal candidates to those for which the amount of data is less than for the original signal; a sub-signal re-creation section which determines a created sub-signal which is actually to be used, using the created sub-signal candidates produced by the created sub-signal selection section; a compression mapping determination section which determines, from the sub-signals produced by the sub-signal re-creation section, a mapping for calculation of a compressed signal; and a signal compression section which calculates a compressed signal corresponding to the sub-signals obtained by the sub-signal re-creation section, based upon the mapping obtained by the compression mapping determination section.